



A Rockwell Automation Company

Louisiana Pacific Corporation Swan Valley OSB

The Client:

Founded in 1973 and headquartered in Portland, Oregon, LP is one of the largest building products manufacturers in North America, with facilities throughout the United States, Canada, Ireland and Chile. LP owns almost a million acres of timberland, predominantly in Southern United States, and has more than 60 manufacturing facilities in North America.

LP's trademark is their superior ability to provide a wide variety of cost-competitive commodity and value-added specialty building products to our growing retail, wholesale, homebuilding, and industrial customers.

As one of North America's largest suppliers of building products, LP is committed to providing high-quality

products and ideas, and the highest level of service to customers.

The LP Swan Valley plant is one of the highest producing plants in all of the LP Corporation, and also holds the record for the longest period with no accidents on site.

The plant uses 900,000 cubic meters of wood and produces 310,000 metric tons of oriented strand board annually. Oriented strand board is manufactured by combining wood chips with wax and resins under high heat and pressure. Oriented strand board is usually marketed in sheets, similar to plywood.

The Requirement:

In the past, in order to change the board size, the press operator had to change the mat weight set point for the forming line and the press recipe separately. And whenever the press recipe was changed, the operator was responsible for timing the press recipe change according to the mat weight change on the forming line. If the press recipe change was not timed correctly, the result would be several boards rejected or downgraded.

LP wanted to eliminate the possibility of having to reject or downgrade boards, so the answer was to implement automatic recipe control which would incorporate the forming line mat weight and the press recipe.

LP also wanted to be able to track the mat weight of each individual board through the entire process up to the board scale.

The Design Solution:

LP already had purchased two industrial PCs that were running Wonderware in the press booth. One of the PCs was being used for the mat weight application, and the other for the press recipe application. Hinz used some of the existing screens from the press recipe application and moved them into the mat weight application, and made some changes to the form and function of the screens to follow the same color scheme and look of the mat weight screens.

The PLC control was done in two existing Quantum PLCs, and no additional hardware was added.

The new recipe control system is called Product Recipe Control, because of the synchronization between the forming line mat weight and the press recipe. To change the product recipe, the operator now selects the desired recipe on the Wonderware screen, and clicks on "run". The PLC then times the press recipe change to the forming line mat weight change.

A mat tracking screen was also added to the application, which allows the operator to see the current running recipe, the upcoming recipe, and mat weight set points and actual readings through 9.5

